

Figure 1A
Neutrokinin- α

1	AAATTCAAGGATAACTCTCCTGAGGGGTGAGCCAAGCCCTGCCATGTAGTGCACGCAGGAC	60
61	ATCAACAAACACAGATAACAGGAAATGATCCATTCCCTGTGGTCACTTATTCTAAAGGCC	120
121	CCAACCTCAAAGTTCAAGTAGTAGATGGATGACTCCACAGAAAGGGAGCAGTCACGCC	180
1	M D D S T E R E Q S R L	12
181	TTACTCTGCCTTAAGAAAAGAGAAGAAATGAAACTGAAGGAGTGTGTTCCATCCCTCC	240
13	T S C L K K R E E M K L K E C V S I <u>L P</u>	32
	CD-I	
241	CACGGAAGGAAAGCCCCCTCTGTCCGATCCTCCAAAGACGGAAAGCTGCTGGCTGCAACCT	300
33	<u>R K E S P S V R S S K D G K L L A A T L</u>	52
	CD-I	
301	TGCTGCTGGCACTGCTGTCTTGCTGCCTCACGGTGGTGTCTTCTACCAGGTGGCGCCC	360
53	<u>L L A L L S C C L T V V S F Y Q V A A L</u>	72
361	TGCAAGGGGACCTGGCCAGCCTCCGGCAGAGCTGCAGGGCCACCACGGGAGAACGCTGC	420
73	<u>O G D L A S L R A E L Q G H H A E K L P</u>	92
	CD-II	
421	CAGCAGGAGCAGGAGCCCCAAGGCCGGCTGGAGGAAGCTCCAGCTGTCACCGCGGGAC	480
93	<u>A G A G A P K A G L E E A P A V T A G L</u>	112
	CD-III	
481	TGAAAATTTGAACCAACCAGCTCCAGGAGAAGGCAACTCCAGTCAGAACAGCAGAAATA	540
113	K I F E P P A P G E G N S S Q N S R N K	132
541	AGCGTGCCGTTCAAGGTCCAGAAGAAACAGTCACTCAAGACTGCTTGCAACTGATTGCAG	600
133	<u>R A V Q G P E E T V T Q D C L Q L I A D</u>	152
	CD-IV	
601	ACAGTGAAACACCAACTATACAAAAGGATCTTACACATTGTTCCATGGCTTCTCAGCT	660
153	S E T P T I Q K G S Y T F <u>V P W L L S F</u>	172
	CD-V	
661	TTAAAAGGGAAAGTCCCCTAGAAGAAAAAGAGAATAAAATATTGGTCAAAGAAACTGGTT	720
173	<u>K R G S A L E E K E N K I L V K E T G Y</u>	192
	CD-V	
CD-VI		
721	ACTTTTTATATATGGTCAGGTTTATATACTGATAAGACCTACGCCATGGACATCTAA	780
193	<u>F F I Y G O V L Y T D K T X A M G H L I</u>	212
	CD-VI	
CD-VII		
781	TTCAGAGGAAGAAGGTCCATGTCTTGGGATGAATTGAGTCTGGTACTTGTGATG	840
213	<u>O R K K V H V F G D E L S L V T L F R C</u>	232
	CD-VII	
CD-VIII		
841	# GTATTCAAAATATGCCTGAAACACTACCCAATAATTCTGCTATTAGCTGGCATTGCAA	900
233	<u>I O N M P E T L P N N S C Y S A G I A K</u>	252
	CD-VIII	
CD-IX		

Figure 1B
Neutrokinin- α

901	AACTGGAAAGGAGATGA	ACTCCAAC	TGCAATACCAAGAGAAAATGC	CACAAATATCAC	960
253	L E E G D E L O L A I P R E N A Q I S L				272
	CD-X				
961	TGGATGGAGATGT	CACATT	TTGGTGCATTGAA	ACTGCTGTGACCTACTTACACCATGT	1020
273	D G D V T F F G A L K L L				285
	CD-XI				
1021	CTGTAGCTATTTCCCTTCCTGTACCTCTAAGAAGAAGAATCTAACTGAAAATA				1080
1081	CCAAAAA	AAAAAAAAAAAAAA	1100		

FIGURE 2A

	10	20	30	
1	M S T E S M I R D V E L	-----	-----	A E E A TNFalpha
1	M -----	-----	-----	T P P E R L TNFbeta
1	M G A -----	-----	-----	Ltbeta
1	M Q Q P F N Y P Y P Q I Y W - V D S S A S S P W A P P G T V	FasLigand		
1	M D D S T E R E Q S R L T S C L K K R E E M K L K E C V S I	Neutrokinne alpha		
1	M D D S T E R E Q S R L T S C L K K R E E M K L K E C V S I	Neutrokinne alphaSV		
<hr/>				
	40	50	60	
17	L P K K T G G P Q - - G S R R	-----	-----	TNFalpha
8	F -----	-----	-----	TNFbeta
4	----- L G L E G R G G	-----	-----	Ltbeta
30	L P C P T S V P R R P G Q R R P P P P P P P P P L P P P P P	FasLigand		
31	L P R K E E S P S V R S S K D - - G K L L A A T L L L A L L	Neutrokinne alpha		
31	L P R K E E S P S V R S S K D - - G K L L A A T L L L A L L	Neutrokinne alphaSV		
<hr/>				
	70	80	90	
30	----- C L F L S L F S	TNFalpha		
39	----- L P R V R G T T L H L L L G L L L V L L P	TNFbeta		
12	----- R L Q G R G S L L L A V A G A T S L V T	Ltbeta		
60	P P P L P P L P L P P L K K R G N H S T G L C L L V M F F M	FasLigand		
58	S C C L T V V S F Y Q V A A L Q G D L A S L R A E L Q G H H	Neutrokinne alpha		
58	S C C L T V V S F Y Q V A A L Q G D L A S L R A E L Q G H H	Neutrokinne alphaSV		
<hr/>				
	100	110	120	
38	F L - - I V A G A T T L F C L L H F G V I G P Q R E E F P R	TNFalpha		
31	G A Q G L P G V G L - - -	TNFbeta		
32	L L L A V P I T V L A V L A L V P Q D Q G G L V T E T A D P	Ltbeta		
90	V L V A L V G L G L G M F Q L F H L Q K E L A E L R E S T S	FasLigand		
88	A E K L P A G A G A P K A G L E E A P A V T A G L K I F E P	Neutrokinne alpha		
88	A E K L P A G A G A P K A G L E E A P A V T A G L K I F E P	Neutrokinne alphaSV		
<hr/>				
	130	140	150	
66	D L S L I S - P L A - Q A V R S S S R T P S D - - K P V A	TNFalpha		
41	- - - T P S - A A Q - T A R Q H P K M H L A H S T L K P A A	TNFbeta		
62	G A Q A Q Q - G L G F Q K L P E E E P E T D L S P G L P A A	Ltbeta		
120	Q M H T A S - S L E - K Q I G H P S P P P E K K E L R K V A	FasLigand		
118	P A P G E G N S S Q N S R N K R A V Q G P E E T V T Q D C L	Neutrokinne alpha		
118	P A P G E G N S S Q N S R N K R A V Q G P E E T - - - - -	Neutrokinne alphaSV		
<hr/>				
	160	170	180	
91	H V V A N P Q A E G - Q - - - L Q W L N R R A N A L L	TNFalpha		
66	H L I G D P S K Q N - S - - - L L W R A N T D R A F L	TNFbeta		
91	H L I G A P L K - G Q G - - - L G W E T T K E Q A F L	Ltbeta		
148	H L T G K S N S R S M P - - - L E W E D T Y G I V L L	FasLigand		
148	Q L I A D S E T P T I Q K G S Y T F V P W L - - - L S F K	Neutrokinne alpha		
142	- - - - - G S Y T F V P W L - - - L S F K	Neutrokinne alphaSV		

FIGURE 2B

	190	200	210	
114	A N G | G V E | L R D N - Q L | V V P | S E | G L Y | L I | Y S Q | V L F | K G			TNFalpha
89	Q D G | G F S | S L S | N N - S L L | V P T | S G I | Y F V | Y S Q | V V F S G			TNFbeta
114	T S G | T Q F | S D A E | G L A L | P Q D | G L Y | Y L Y C L V G Y R G			LTbeta
172	- S G V K Y K | K G - G L V I N E | T G L Y F | V Y S K V Y F R G			FasLigand
174	R G S A L E | E E K E N K I L V K E | T G Y F | F I Y G | Q V L Y T D			Neutrokinne alpha
155	R G S A L E | E E K E N K I L V K E | T G Y F | F I Y G | Q V L Y T D			Neutrokinne alphaSV
	220	230	240	
143	Q G C P - - - - - S T H V L L | T H T I S R I A V S | Y Q T K			TNFalpha
118	K A Y | S P - - - K A T S S P L Y | L A H E | V Q L F S S Q | Y P F H			TNFbeta
144	R A P P G G | G D P Q G R S V T | L R S S L Y R A G G A | Y G P G			LTbeta
200	Q S C N - - - - - N L P L S H K V Y M R N S K Y P Q D			FasLigand
204	K T Y A M G - - - - - H L I | Q R K K V H V F G D E L S - -			Neutrokinne alpha
185	K T Y A M G - - - - - H L I | Q R K K V H V F G D E L S - -			Neutrokinne alphaSV
	250	260	270	
167	V N - - L L S | S A I K S | P C Q R E T P E - - G A E A K | P W Y E			TNFalpha
146	V P - - L L S | S Q K M | V Y P - - - - - G L Q E | P W L H			TNFbeta
174	T P E | E L L E | G A E | T V T P V L D P A R R O | Q G Y G | P L W Y T			LTbeta
222	L V - - M M E | G K M M | S Y C - - - - - T T G Q M W A R			FasLigand
226	L V T L | F R C I | Q N M P E T L P N - - - - - - - - - N			Neutrokinne alpha
207	L V T L | F R C I | Q N M P E T L P N - - - - - - - - - N			Neutrokinne alphaSV
	280	290	300	
193	P I Y L G G V F Q L E | K G D R | L S A E | I N R P D | Y L | D F A E			TNFalpha
166	S M Y H | G A A | F Q L T | T Q G D Q | L S T H | T D G I | P H L V L S P			TNFbeta
204	S V G F G G | L V Q L R | R G E R V Y | V N I S H | P D M V | D F A R			LTbeta
242	S S Y L G A V F N L T | S A D H L | Y V N V S E L S L V N F E E			FasLigand
244	S C Y S A G I A K | L E E G D E L | Q L A I | P R E N A Q I S L D			Neutrokinne alpha
225	S C Y S A G I A K | L E E G D E L | Q L A I | P R E N A Q I S L D			Neutrokinne alphaSV
	310			
223	S G | Q V Y | F G | I I A L			TNFalpha
196	S - T V F F | G A F A L			TNFbeta
234	- G K T F F | G A V M V G			LTbeta
272	S - Q T F F | G L Y K L			FasLigand
274	G D V T F F | G A L K L L			Neutrokinne alpha
255	G D V T F F | G A L K L L			Neutrokinne alphaSV

Figure 3
Neutrokinin- α

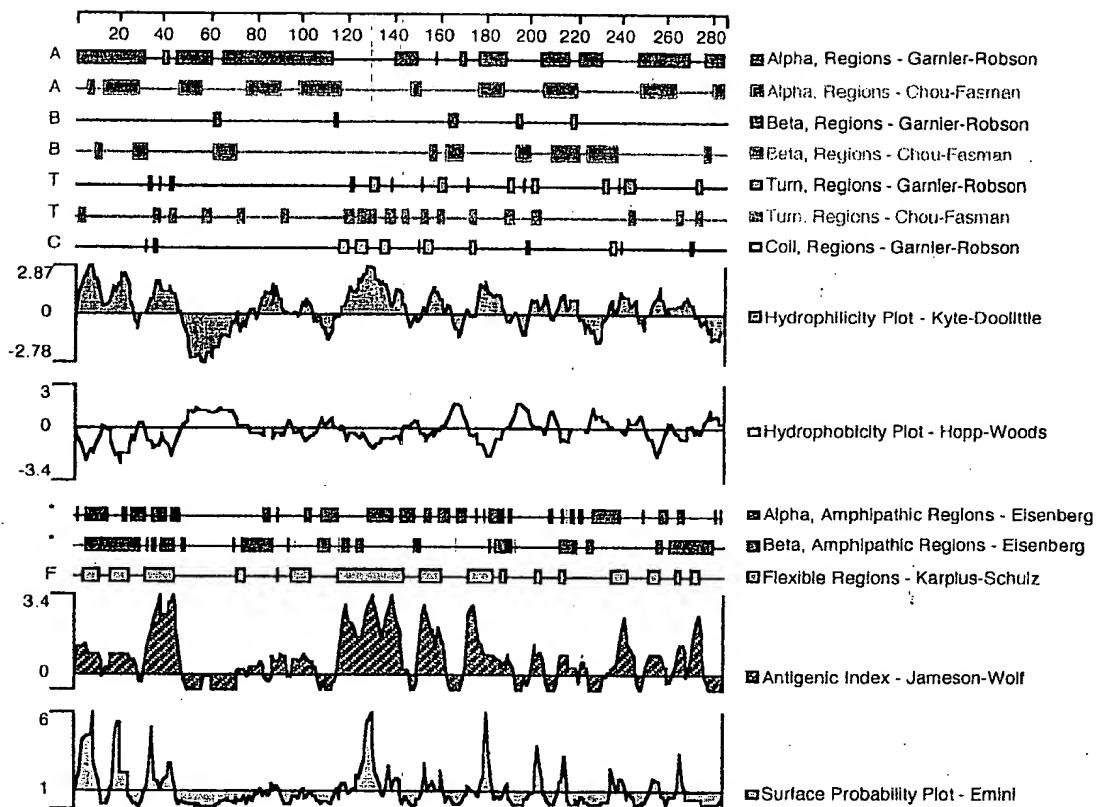


FIGURE 4 A

FIGURE 4B

	401	450
HSOAD55R	.....	.....
HNEDU15X	GCAGGGCCAC CACCGGAGA ACCTGCCAGC AGGAGCAGGA GCCCCCAAGG	
HSLAH84R	ATAACCCAAA AAAANNTTAA ANGGGTANGN GNNANANGNG GGGNNNGTNN	
HLTBM08R	CAAGGNACTG GTTANTTTNT AAATATGGTC AGGTTNTAT ANCTGGTAGG	
	451	500
HSOAD55R	.....	.....
HNEDU15X	CCGGCCTGGA GGAAGCTCCA GCTGTCACCG CGGGACTGAA AATCTTGAA	
HSLAH84R	CNNGNNGNNNT TTTNGGNNTA TNNTNTNNNT GGGNNNNGTA AAAATGGGC	
HLTBM08R	CCTCGCCATG GGCATTNATT CANGGNAGG NCNNCTTTT GGGNTGA...	
	501	550
HSOAD55R	.....	.....
HNEDU15X	CCACCAGCTC CAGGAGAAGG CAACTCCAGT CAGAACAGCA GAAATAAGCG	
HSLAH84R	CNANGGGGN TTTT.....	
HLTBM08R	.....
	551	600
HSOAD55R	.....	.....
HNEDU15X	TGCCGTTCAAG GGTCCAGAAG AAACAGTCAC TCAAGACTGC TTGCAACTGA	
HSLAH84R	.....
HLTBM08R	.....
	601	650
HSOAD55R	.....	.....
HNEDU15X	TTGCAGACAG TGAAACACCA ACTATACAAA AAGGATCTTA CACATTTGTT	
HSLAH84R	.....
HLTBM08R	.....
	651	700
HSOAD55R	.....	.....
HNEDU15X	CCATGGCTTC TCAGCTTAA AAGGGGAAGT GCCCTAGAAG AAAAAGAGAA	
HSLAH84R	.....
HLTBM08R	.....
	701	750
HSOAD55R	.....	.....
HNEDU15X	TAAAATATTG GTCAAAGAAA CTGGTTACTT TTTTATATAT GGTCAAGTTT	
HSLAH84R	.....
HLTBM08R	.....
	751	800
HSOAD55R	.....	.....
HNEDU15X	TATATACTGA TAAGACCTAC GCCATGGGAC ATCTAATTCA GAGGAAGAAG	
HSLAH84R	.....
HLTBM08R	.....

FIGURE 4C

	801	850
HSOAD55R	.....
HNEDU15X	GTCCATGTCT TTGGGGATGA ATTGAGTCTG GTGACTTTGT TTCGATGTAT	
HSLAH84R	.....
HLTBM08R	.....
	851	900
HSOAD55R	.....
HNEDU15X	TCAAAATATG CCTGAAACAC TACCCAATAA TTCCCTGCTAT TCAGCTGGCA	
HSLAH84R	.....
HLTBM08R	.....
	901	950
HSOAD55R	.....
HNEDU15X	TTGCAAAACT GGAAGAAGGA GATGAACCTCC AACTTGCAAT ACCAAGAGAA	
HSLAH84R	.....
HLTBM08R	.....
	951	1000
HSOAD55R	.....
HNEDU15X	AATGCACAAA TATCACTGGA TGGAGATGTC ACATTTTTG GTGCATTGAA	
HSLAH84R	.....
HLTBM08R	.....
	1001	1050
HSOAD55R	.....
HNEDU15X	ACTGCTGTGA CCTACTTACA CCATGTCTGT AGCTATTTTC CTCCCTTCT	
HSLAH84R	.....
HLTBM08R	.....
	1051	1100
HSOAD55R	.....
HNEDU15X	CTGTACCTCT AAGAAGAAAG AATCTAACTG AAAATACCAA AAAAAAAA	
HSLAH84R	.....
HLTBM08R	.....
	1101	
HSOAD55R	.....
HNEDU15X	AAAAAA	
HSLAH84R	.....
HLTBM08R	.....

Figure 5A
Neutrokinin- α SV

1	ATGGATGACTCCACAGAAAGGGAGCAGTCACGCCCTACTTCTTGCCCTTAAGAAAAGAGAA	60
1	M D D S T E R E Q S R L T S C L K K R E	20
61	GAAATGAAACTGAAGGAGGTGTCTTCCATCCTCCCACCGAAGGAAAGCCCCCTGTCCGA	120
21	E M K L K E C V S I L P R K E S P S V R	40
	CD-I	
121	TCCTCCAAAGACGGAAAGCTGCTGGCTGCAACCTTGCTGCTGGCACTGCTGTCTGCTGC	180
41	S S K D G K L L A A T L L L A L L S C C	60
	CD-I	
181	CTCACGGTGGTGTCTTCTACAGGTGCCCTGCAAGGGGACCTGCCAGCCTCCGG	240
61	L T V V S F Y Q V A A L O G D L A S L R	80
	CD-II	
241	GCAGAGCTGCAGGGCACCACGGAGAACGCTGCCAGCAGGAGCAGGAGCCCCAAGGCC	300
81	A E L Q G H H A E K L P A G A G A P K A	100
	CD-II	
	CD-III	
301	GGCCTGGAGGAAGCTCCAGCTGTACCGCGGGACTGAAATCTTGAAACCACAGCTCA	360
101	G L E E A P A V T A G L K I F E P P A P	120
	CD-III	
	#	
361	GGAGAAGGCAACTCCAGTCAGAACAGCAGAAATAAGCGTGCCGTTCAAGGTCCAGAAGAA	420
121	G E G N S S Q N S R N K R A V Q G P E E	140
421	ACAGGATCTTACACATTGTTCCATGGCTCTCAGCTTAAAGGGGAAGTGCCTAGAA	480
141	T G S Y T F V P W L L S F K R G S A L E	160
	CD-IV	
481	GAAAAAGAGAATAAAATATTGGTCAAAGAAACTGGTTACTTTTATATGGTCAGGTT	540
161	E K E N K I L V K E T G Y F F I Y G O V	180
	CD-IV	
	CD-V	
541	TTATATACTGATAAGACCTACGCCATGGACATCTAATTCAAGAGGAAGAGTCATGTC	600
181	L Y T D K T Y A M G H L I O R K K V H V	200
	CD-VI	
	CD-VII	
601	TTGGGGATGAATTGAGTCTGGTACTTGTGATGTATTCAAATATGCCCTGAAACA	660
201	E G D E L S L V T L F R C I O N M P E T	220
	CD-VIII	
	CD-VIII	
661	CTACCCAATAATTCTGCTATTCAAGCTGGCATGCAAAACTGGAAGAAGGAGATGAAC	720
221	L P N N S C Y S A G I A K L E E G D E L	240
	CD-IX	
	CD-X	
721	CAACTTGCATACCAAGAGAAAATGCACAAATATCACTGGATGGAGATGTCACATT	780
241	Q L A I P R E N A Q I S L D G D V T F F	260
	CD-X	
	CD-XI	
781	GGTGCATTGAAACTGCTGTGACCTACTTACACCATGTCTGTAGCTATTTCCCTCC	840
261	G A L K L L	266
	CD-XI	

Figure 5B
Neutrokinin- α SV

841 TCTGTACCTCTAAGAAGAAAGAATCTAACTGAAAATACCAAAAAAAAAAAAAAAA 900
901 AAA 903

Figure 6
Neutrokinin- α SV

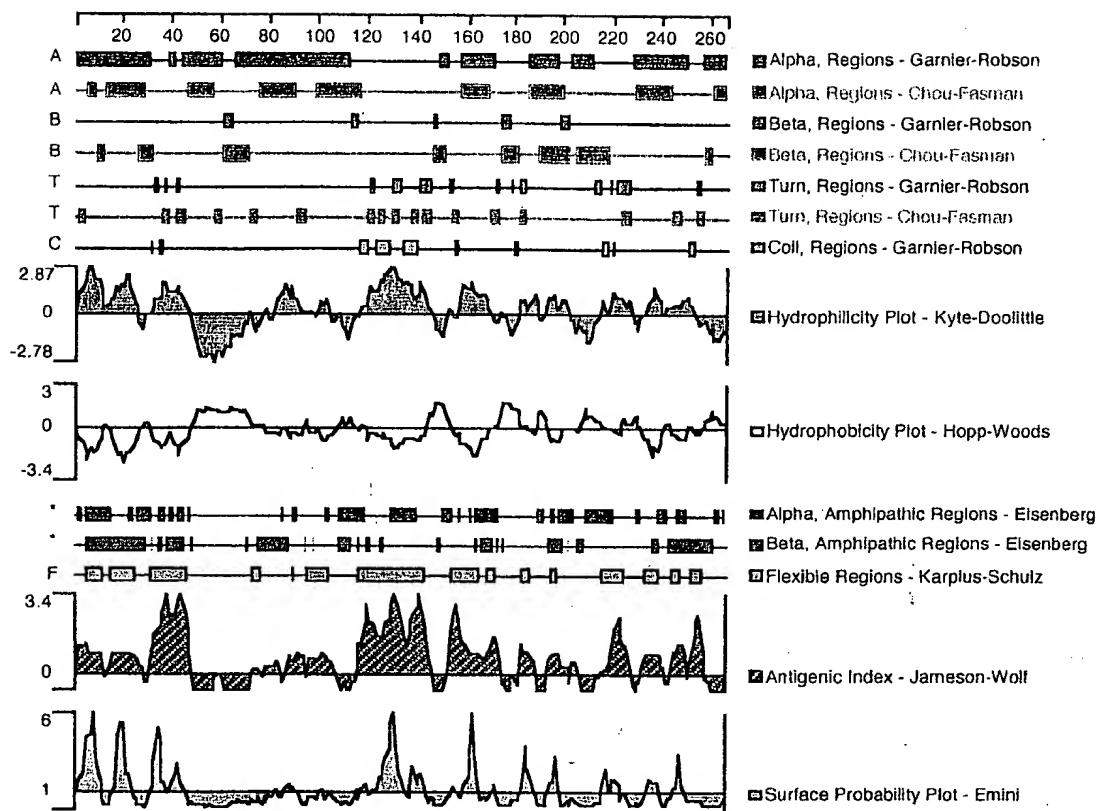


Figure 7

a.

leutrokinin-

alpha M D D S T E R E Q S R L T S C L K K R E E M K L K E C V S I L P R K E S P S V R S 41

Transmembrane Region		
S K D G K L L A A T L L A L L S C C L T V V S F Y Q V A A L Q G D L A S L R A E	82	
L Q G H H A E K L P A G A G A P K A G L E E A P A V T A G L K I F E P P A P G E G	123	
↓		
N S S Q N S R N K R A V Q G P E E T V T Q D C Q D I A D S E E P T I Q K G S Y	164	
April H S V I H V P I N A S K - D D S D V	134	
TNF S P V A H V V E N P Q A E G Q - - - - -	102	
L T α K P A A H I G D P S K Q N S - - - - -	77	
A		
F N P W L S - - - - - F K R G S A P E E K E N K I E N K E T G Y F E H Y G I O N V	200	
E V M W Q P A - - - - - R R G R G E Q A Q G Y G V R I Q D A G G V V L L M S O N V	170	
- L Q V I N R R A N A L A N G I V E E R D - - - Q F V V S E G C L I V L V Y S O N V	139	
- L L W R A N T D R A F Q D G I F S S N - - - S H F L V E P T S G I V V V Y S O N V	114	
B		
Y T D K E V M - - - - - A M I G H D I Q R K K M H V E G D E L S L V T I F R C I O N M P	237	
I Q D E V E F F - - - - - E M D Q Q V V S R E - - - - G D Q G R Q E T E F R G I R S	201	
K G Q G C P - - - - - S T R V L E T E T H S R I A V S S Q Q T K V N L L S A I K S	176	
S G K A W S P K A Q S S P H Y D A H E W Q O L E S S Q W P F H V P L L S S O K M V	155	
C		
E - - T L P - - - - - N N S C Y S A G I A K D E E Q D E E T Q L A J P R E N	268	
S H P D R A - - - - - V N N S C Y S A G A V E H H H Q G D I T H V I I P R A R	234	
C Q R E T M E G A E A K D W Y E P I V L G G V P O I L E K G D R I C A E H N R P D Y	217	
Y P - - - - - G L Q E E W L H S M V H G A A F O I T Q E G D Q T H T D G I P H	190	
D		
Q I S D G D V D E F F G A L K E L		285
K L N S H G E L G F V K		250
D F A E S G Q V Y E G I I A		233
V L S - R S T V P E G K F A		205
E		
F		
G		

b.

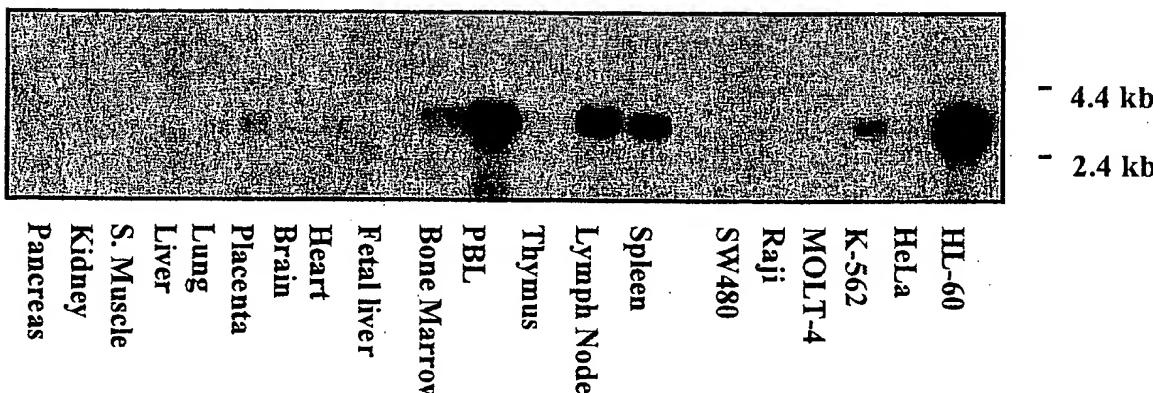
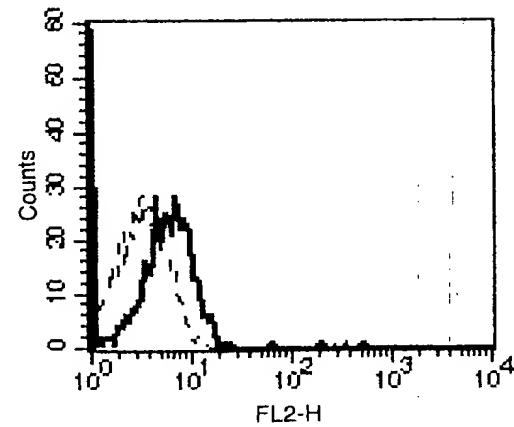


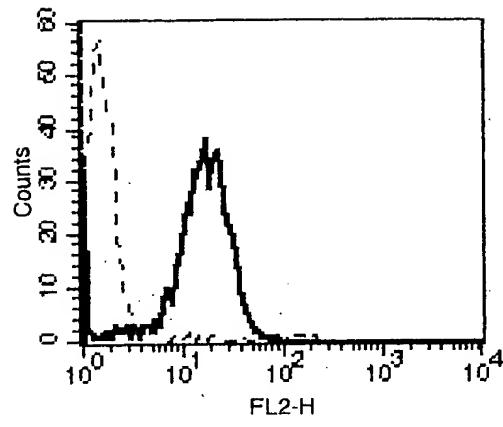
Figure 8

a.

Medium only



IFN γ (100 U/mL)



b.

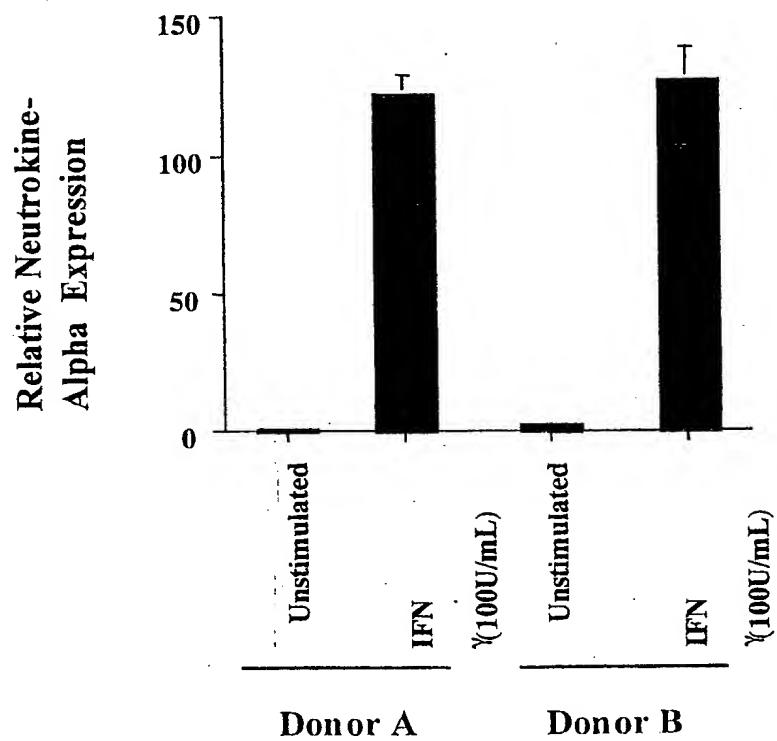
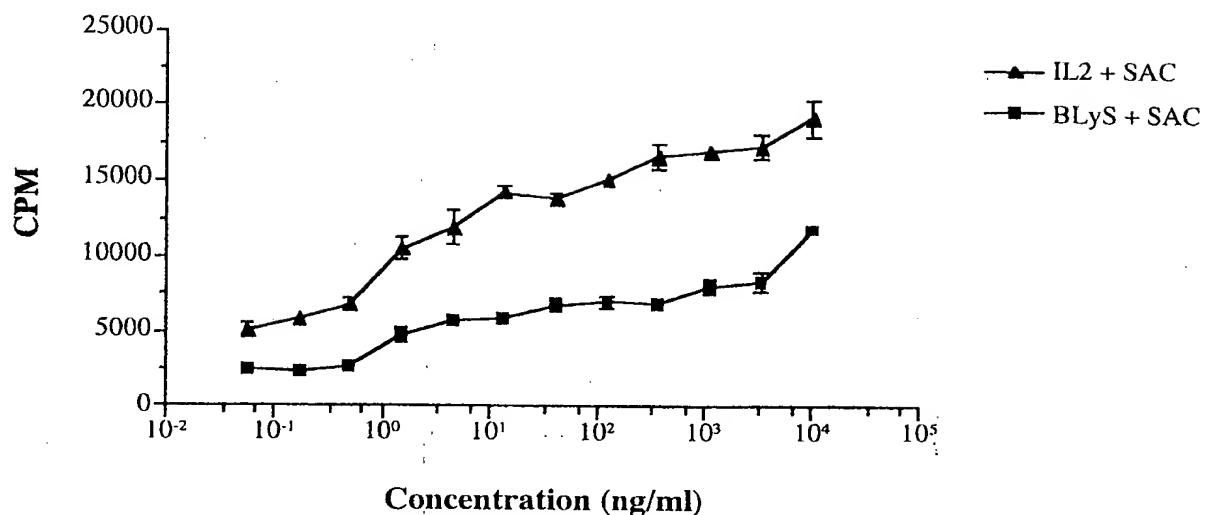


Figure 9

a.



b.

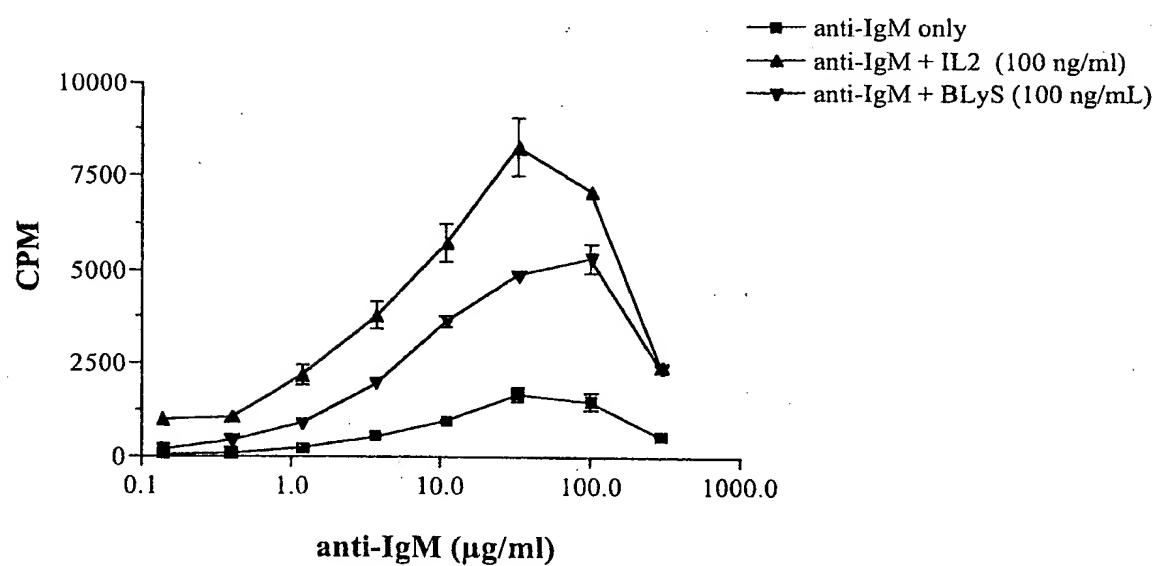
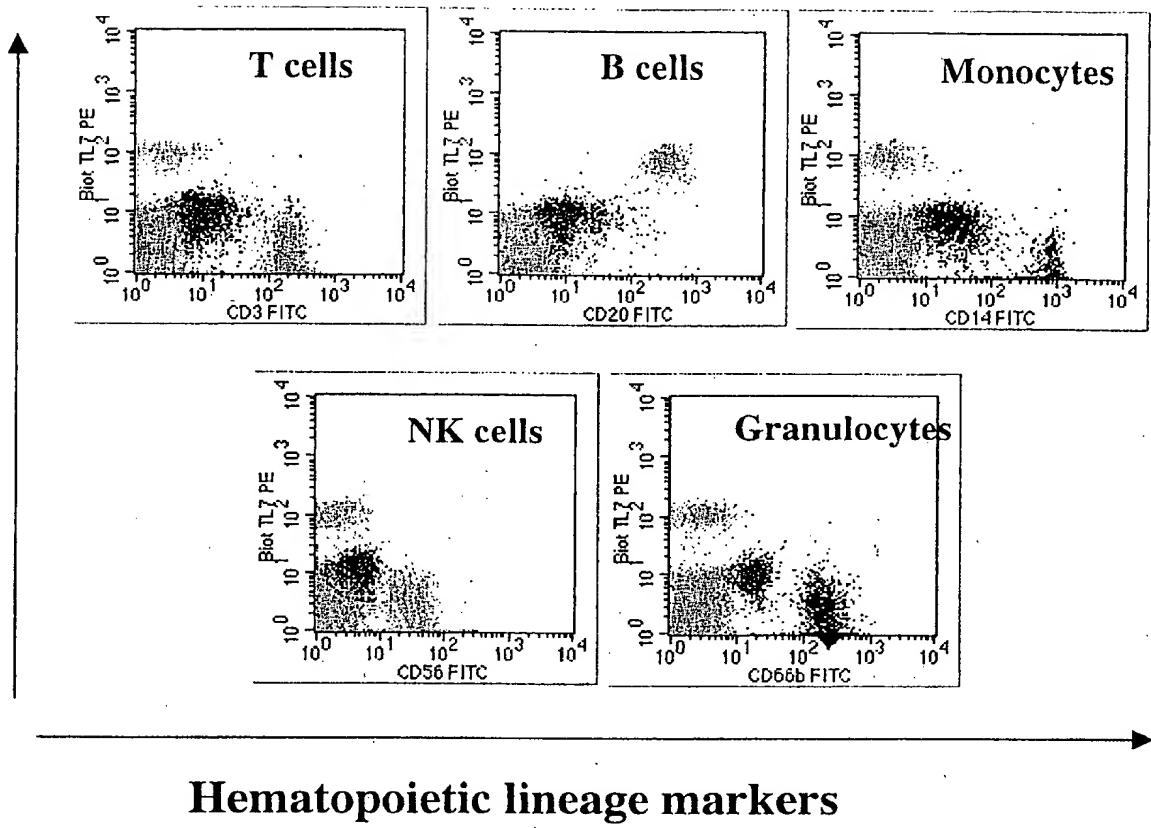


Figure 10

a.

Biotinylated Neutrokinine-
alpha binding



Hematopoietic lineage markers

b.

U-937

IM-9

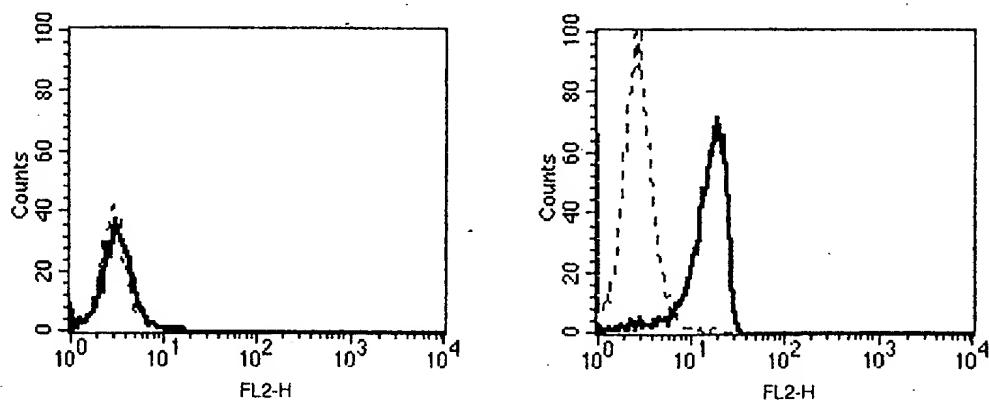


Figure 11

